

ABSTRACT OF THE DISCLOSURE

A tunable power amplifier which comprises at least one input matching circuit receiving an RF signal from an RF input and creating a first output RF signal, said at least one input matching circuit including at least one voltage tunable varactor to enable center frequency tuning; a first amplifier receiving said first output RF signal from said at least one input matching circuit and creating a second output signal, said second output signal providing input for at least one inter-stage matching circuit, said at least one inter-stage matching circuit creating a third output signal; a second amplifier receiving said third output signal and creating a fourth output signal; an output matching circuit receiving said fourth output signal and generating an RF output signal; and an embedded controller associated with said input matching circuit, inter-stage matching circuit and output matching circuit for frequency tuning control. The tunable power amplifier of the present invention can also include one additional inter-stage matching circuit and wherein said at least one inter-stage matching circuit includes at least one tunable varactor to enable center frequency tuning.